1: Spier E-5 (1918) 1928
NT14 Plateau Yumans NT14
Havasupai

ECONOMIC LIFE

Agriculture

The Havasupai are largely agriculturalists. Their interest centers so firmly in their fields, and comparatively so little attention is given to wild products, that the loss of a crop may mean a famine year. In fact, although the quantity of wild seeds and plants that is gathered is considerable, it is used chiefly during the winter to eke out the field products. The Havasupai are inordinately proud of their abundant harvests and their superiority in this regard to the Walapai, Navaho, and Paiute. Harvest is a time for jollification, when their neighbors come to share their bounty. So great is their interest in their fields that even today, when remunerative employment is to be had on the plateau, so Mr. C. H. Gensler, the former agent, informs me, men will leave their work, with its ready money, to tend their crops. 241

The fields[1] about the village are as extensive as irrigation will permit, so that, depending on the location of the erratic creek, all of the one hundred tillable acres are farmed. A new field is cleared of brush by grubbing and burning it. Trees are felled by burning their bases; the charcoal is not chopped away, nor are trees ever girdled. The fields are fenced. [311]

At present there are two dams supplying water to the irrigating ditches; the first is located well above the village, whence the main ditch follows the east canyon wall as far as Camp 29 (see map, Fig. 50); The second is at the bend below Camp 26 whence its main ditch parallels the creek in the direction of Camp 51. The dam, which extends halfway across the shallow stream is built about a heavy log set well into the bank, where it is held in place by stakes driven on the down-stream side. The bank is roughly faced with stones to prevent the log washing out. A series of poles are driven obliquely along the upstream side, their upper ends resting on the log. Fascines of willows, about 1.5 m. long and containing stones, are laid end to end along the base of this slanting face, with a second set laid in front on the bed of the creek breaking joints with these. A second tier of fascines might be built above these. Willow brush, placed transverse to the stream, is then piled thickly on the face of the dam to the top. The rapidity of the stream is such as to drive considerable water behind this scoop into the main ditch. Changes of water level produced by every little storm necessitate frequent renewals of the dam. Constant attention is also necessary for the irriga- 312

[1] There seems to be no word for cornfield; one speaks of going to his corn, even if the field contains a mixed crop.

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51. Shorty lived with his mother, Ca¡t. Burro's sister, near her brother's house, 63. Teyadjava, who lived at his father's house, 4>Sakwemidja at her father's house, 6; then he took her to 4. He died and she returned to her mother on her late father's land at 13. Shorty>her at 13; then took her to 51 on her father's land.

53. Mark, who lived on his mother's brother's land at 53>Andjelik at her brother's house, 8. Then took her to 53; she died. Henry, his brother, who lived with their mother at their dead stepfather's house at 52>Nina at her father's house, 69. Then to 53: she died in 1919.

54. Roger, who lived at father's site at 54>Rock Jones' daughter at her father's, 23. Took her to 54; she died. Then he>a Walapai: brought her to 54; she ran away.

55. Tobey, who lived with older brother, Putcilvoiya, at 57>Capt. Jim's daughter at her father's (29?); she died. Took Mecca from her father's house, 48, to 55 on his maternal grandmother's brother's land.

56. Little Jim, who lived with his father at 12>his older brother's wife's younger sister who lived with her father at 70. Then brought her near his brother's, 12. She died and he went to live at 61. Then he>Susie, a Walapai, at Pine Spring; then to 56.

57. Putcilvoiya, who lived at father's house, 60>Deskumlauwa's younger sister who lived with her sister's husband at 62. Then to 57 on father's land. His brother Fred who lived with him (at 57?)>Watahomidja's daughter at her father's house, 16. Then he took her to 57; she died. Then he went>Helen at her father's house, 10; he died.

58. Smiley, who lived alone at 31>a woman who lived at 19. Deskumlauwa lived with Smiley's older brother at 2. He died and Smiley took her to 58 on his mother's land. (His father was a Walapai).

Property and Inheritance

311 423

Private ownership of land exists only where the land is cultivated. With the exception of a few patches elsewhere in their territory, such as the Indian Gardens on the Bright Angel trail below Grand Canyon Station, the fields are located in the vicinity of the village in Cataract Canyon. About one hundred acres (one-fifth) of the bottom land there is tillable; depending on the height of the creek permitting irrigation, all of it is farmed. Holdings are not in large continuous strips, but numerous patches scattered through the two or more miles of canyon above the falls. This haphazard distribution is due not only to the

311 133 423

chances of inheritance, transfer, and sale, but more particularly to the changes wrought by the marauding creek. The stream changes its level and often its position with each big flood, wiping out some fields and leaving others beyond the reach of irrigation, forces their abandonment. The whole group of holdings near Walapai Canyon has been obliterated in this way. Such changes will sometimes bring hitherto uncleared

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lands and others long abandoned within the possibility of cultivation, when they are almost certain to be used without delay by someone desiring additional fields.

1: Spier E-5 (1918) 1928
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ing additional fields. Proprietary rights in land depend most emphatically on use, for unless it is generally understood that a patch has not been finally abandoned, someone does not fail to occupy it if it is at all cultivable. 311 423

The cultivated land forms a continuous strip through the canyon of corn and alfalfa fields, pastures, orchards, and groves. Boundaries are definite and marked by fences, lines of trees, or ditches. Fencing may be an old custom as Cushing saw wooden fences in use in 1881.[1]

Title to land is in the hands of the men, although because of its utilization title might better be characterized as joint ownership by the family, the economic unit that works it. Women rarely have independent control of land; those who have are invariably widows without other means of support. For instance, a Walapai widow who lives with her Havasupai stepdaughter has taken an unattractive patch for her own. When a woman marries she transfers her planting activities from her own family fields to those of her husband. Children are never land owners, although they may help their elders to plant. There is not even nominal ownership in order to distribute the hazard of bad luck such as occurs among the White Mountain Apache. If parents have sufficient land, they allow their adult children to plant in the surplus. Thus, Teikapaniga and his wife let their children, Jess (and his wife) and Helen, use half their land. Since Helen married she assists her husband in planting his fields. 423 [592] [589]

Land is inherited in the male line. All the sons share in the joint heritage, which may remain undivided for years until they have established families whose diverse interests make parceling desirable. The widow and unmarried daughters share at least in the use of the land, but they cannot be said to have title to it, since the widow's relatives and the daughter's children never inherit it from them. If the widow re-marries too soon, her interest is lost, reverting to the other heirs. In the absence of direct heirs, i.e., sons or their male descendants, unmarried daughters, or widow, the property goes to the dead man's brothers or their male heirs. Evidently daughters retain some right to share the use of their parents' land even after they marry, since a portion is often set aside for them to plant for the support of their children. Such land normally reverts to their fathers' families. Divorced and widowed women have at all times the privilege of falling back on the parental lands for support. 428 [562] [589] [736]

[1] Cushing, (a), 374; compare Zuñi sand-mound boundaries [Cushing, (b), 152] and Navaho fences of brush [Stephen, (b), 354].

2:Iliff Y-5 (ca. 1901) 1954 NT14 Plateau Yumans NT14
Havasupai

These Indians apparently had no knowledge of 273
peyote. There was no intoxicating liquor of any kind on the
reservation. I was beginning to realize that, on the surface, life in 000
this canyon might be like living among children, except when
savage tempers were aroused—and then? Well, I had asked for
adventure.

I still did not know what to write in that annual report.

The school session had been interrupted by the departure of 224
the former superintendent. Vacation, at this school, came in the 222
fall, when the entire tribe made an exodus to the mesa to hunt
game and to gather wild seeds and plants, so I planned to open
school on Monday morning, asking Vesnor to notify the people
in the village. The following Saturday I would be free to take a 161
census of the tribe and determine the acreage under cultivation. So 311
far, I had no basis whatever from which to work out the report
Mr. Ewing wanted. But by verifying the statement of a former
teacher that there were two hundred fifty Indians in the tribe and
three hundred fifty acres in gardens and orchards, I could incor-
porate his figures in my report to Washington.

Even in summer, the sun did not rise in our part of the canyon 132
until after nine o'clock, so it was still gloomy and damp when I
crossed the grounds to the school building Monday morning. The 133
school plant stood at the head of the stream, the dividing line
between the upper, desert end of the canyon and the lower sec-
tion, a jungle of greenness. Immediately behind our schoolhouse
stood a column of stone about three hundred feet high, partly
detached from the wall by rain and frost. If it fell, it would bury
the schoolhouse beneath tons of rock. The danger seemed immi-
nent as I gazed at the upper end of the column, standing straight
and free. Later, I learned that such columns topple over only
after a flood.

I had rung the warning bell, and it was time for school, but no 812
children had appeared. Then the bushes parted violently and 177
dozens of little Indians burst through on the run. Behind them,
maneuvering his well-trained pony with all the skill of a cattleman
rounding up strays, rode Vesnor. The older pupils followed more

2:11iff Y-5 (ca.1901) 1954 NT14 Plateau Yumans NT14
Havasupai

ages, battered by gales and floods which had brought down sections of the wall itself? The Indians must have asked themselves these questions many times. The wise men of the tribe gave them a satisfying answer: the indestructible god-spirit lived there to watch over and protect the people in their new home. The Indians spoke of these gods with the naturalness with which one mentions a neighbor or a friend.

"Our gods make gardens grow good. They watch over the people," they told me confidently.

And in a sense, I was indebted to their gods for this greatest adventure of my life. The Indians' well-being depended on these god-spirits, so they had refused to leave the canyon. When the Indian Office considered establishing a school for the Havasupai children, pressure was brought to induce the Indians to move to the plateau. It would be simpler for them to move out of the canyon than for the government to freight equipment for the school across the desert and down the precipitous trail. But the Indians became bewildered and frightened. "If we leave our gods, we die!" they cried. So the school came down to them. Yet the officials located it a little too far up the gorge for the gods to guard it with a watchful eye, which may account for the fact that, later on, it was destroyed by a flood.

Just beyond the gods, the walls swung apart. The broad, level floor between was occupied by the village. Spaciousness of land and sky inspired a sense of freedom. The cultivated acres were laid out like a checkerboard, in somewhat irregular squares, each displaying the mixed greenery of gardens and orchards. A fence of brush or poles enclosed each square, emphasizing the mosaic effect. The Indians had not completely removed the wilderness from the canyon; the stream could be traced by the tangle of wild vegetation lining its banks, and dense thickets claimed too much of the land. Old willow trees and cottonwoods dominated the scene.

The houses sat cosily near the gardens, or were connected with them by tree-shaded lanes. There were several half-dugouts, but

3:James T-5 (ca. 1900) 1903
NT14 Plateau Yumans NT14
Havasupai

133 361 layers are of differing thicknesses, wind in and out, as if following the meandering course of the stream, and over this the perfect blue of the Arizona sky. These make the most marvellously picturesque dwelling-place of America. Even Acoma's mesa heights and Walpi's precipice-surrounded walls are not more picturesque, and when you add the charm of the verdure nourished by the sweet waters of the Havasu, the picture is complete in its unique attractiveness.

Not even in the Green Emerald Isle, or the county of Devonshire, or the vineyards of France, is richer verdure to be found than fills up the open space between these great walls. Willows reveal the winding path of 133 241 the Havasu, and everywhere else are the fields of the Indians. Patches of corn, watermelons, squash, canteloupes, beans, sunflowers, chili, onions, and alfalfa, with here and there peach, mesquite, and cottonwood trees, abound. As a rule these patches are protected and set off one from another by hedges of wattled willows or fences of rudely placed cottonwood poles. Through [487] the fields trails meander in every direction, and they are [312] also "cut up" by irrigating ditches. Some of the better irrigated fields are divided into small sections — like the squares of a checker-board — in order that the water may be more systematically distributed.

342 The peaceful *hawas* of the Havasupais nestle here and there among these verdant growths. Themselves covered with willows, it is often hard to distinguish them from the trees, were it not that at our approach small [291] groups of men, women, and children, some clad in flaming red, others in all the colors of the rainbow, and some in even less than Mark Twain's descriptive smile, stand forth and reveal the dwelling-places. Now and again

4: Smithson E-5 (1951-1958) 1959 NT14 Plateau Yumans NT14
Havasupai

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Fig. 2. Havasupai fields and orchards in Cataract Canyon, looking northwest. Havasu Creek sweeps around the base of the Wealeva at left. The summit of the Redwall forms the Esplanade, a broad terrace, seen as center and right horizon. The Whitewall rises above the Esplanade at left. Caves or rock shelters formerly used by some families and rock structures used for food storage were located at top of steep talus at the base of the Redwall.

At an elevation of 4000 ft., the Esplanade, 1 mi. wide in places, crumbles away in ragged steps through the upper strata of the Supai formation. Abruptly, vertical walls break away, dropping 500 to 800 ft. and forming the narrow inner gorge of Cataract Canyon. The Supai formation, composed of sandstone and shale, locally is called the Redwall in reference to its color, which contrasts with the Whitewall above. This is not to be confused with the geologic designation of the Redwall limestone, an underlying formation exposed downstream from Supai village in the area of the waterfalls. It is from the crumbling top of the Supai formation that storms wash huge boulders which tumble and crash to the canyon below.

133 [103]

The Factor of Water Supply

The existence of permanent water sources determined the residence pattern. The Havasupai have been described as seminomadic, but a more accurate term might be seasonally migratory. On the plateau, families sometimes built temporary brush shelters when they were harvesting pinyon nuts or other occasional crops, or when the tribe assembled for ceremonial or other purposes, but for the most part, families erected permanent structures to which they returned year after year as long as the house was deemed suitable. The presence of water within a reasonable distance was the determining factor in the location of both permanent and temporary camp sites, excepting those of the most transient nature. There were a number of permanent springs known on the plateau, and the karst topography provided natural reservoirs for retaining precipitation. It is speculated that the prehistoric Havasupai, with the karst examples before them and having the engineering skill and industry to build and keep in constant repair the canyon irrigation system, probably built dams on the plateau to impound water at some of the sites now similarly used by them or neighboring ranchers.

221 312 [342] [361] [241]

Water sufficient for irrigation was present at a site called Indian Gardens, which was located a short distance below the canyon rim on Bright Angel trail and which was farmed by the Havasuapi in early historic times. Prospect Valley, west of Cataract Canyon, also was farmed (Spier, personal communication, 1957). In addition, several other areas, including one on the floor of Grand Canyon proper, were farmed by means of irrigation.

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In Cataract Canyon,* a short distance above the village area, numerous springs emerge on the canyon floor, flowing over impervious shales in the Supai formation. The water is highly charged with minerals, travertine being deposited along the stream's course. This deposition accounts for some of the erratic behavior of the creek. Masses of crumbling travertine jut from the ground here and there, evidence of past shifting of the creek channel. Havasu Creek,* swollen by melting snow or desert cloudbursts, churns its banks into mud, sometimes sweeping away a man's field and the ground beneath his house.

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*The names, Cataract and Havasu Canyon and Cataract and Havasu Creek, appear interchangeably in the literature and all four terms are in common usuage among residents of the area.

[103]

[Text continues on page 10]

193 In January, 1911, the most disastrous flood of historic times funneled
731 melted snow resulting from a sudden thaw on the plateau and higher canyons into the confines of Cataract Canyon. A churning roar from the advancing waters signaled reservation residents, who made a predawn flight to the talus slopes. A wall of water smashed through the village, leveling primitive hogans and stone government buildings alike and sweeping away crops, food [657] stores, and personal possessions. Since that time some measures have been employed by the Office of Indian Affairs, without complete success, to contain the creek in a permanent channel as it flows through the village area.

[312] An irrigation system, installed about 30 years ago, repeatedly has suffered major damage from floods. The Indian Service plans to install new diversion headings and to build three large aqueducts with permanent footings. This is expected to stabilize the present irrigation system and to add a few more acres to land now being farmed (Kelly 1953, 56).

133 About a mile downstream from the village, Havasu Creek tumbles in a
[648] series of waterfalls which attract tourists. The scenic aspect of Cataract Canyon in recent years has become an economic asset and a precipitator of increasing Havasupai-white contacts.

133 Travertine terraces deposited at the crest of a waterfall eventually
311 divert the falls to another location. A severe flood in 1952 destroyed a 50 ft.
731 fall, lowered the creek channel for some distance upstream and rendered useless the irrigation system servicing fields in the vicinity. Additional floods over the next few years further deepened the river channel, washing out adjacent fields and leaving others without water. However, some new gardens are now being planted at lower levels along the stream where land can be reclaimed.

439 Since the two most spectacular waterfalls are beyond the reservation
648 boundary, concern is felt by the Havasupai that their budding tribal cooperative tourist enterprise may be doomed. Private business interests may be able to bypass the reservation area by providing transportation into the canyon at the falls and establishing tourist accommodations there.

Climate, Plants and Animals

132 Records of a climatological substation operated at Supai for 14 years between 1899 and 1930 reveal a maximum annual precipitation of 13.87 inches and minimum of 4.50 inches, averaging 8.89. Precipitation was highest in February, July and August (Martin and Kincer 1933, Section 25, p. 14).

Temperatures in Cataract Canyon are consistently higher throughout the year than on the plateau. Snow seldom reaches the canyon floor, but freezing occurs in the coldest months. On sunny winter days when canyon air is cool, the warmest areas are southern exposures along the top of the talus

The Economy, Old and New

The Precontact Pattern

Before pressures of the white culture were felt, the Havasupai wintered on the plateau. Men, singly or in small groups, went there on summer hunting trips. Whiting (n. d., 61) suggests that the Havasupai "conceive of their agriculture as something incidental, a supplement to a nonagricultural way of life." Whiting points out that even today, when farming is virtually their only resource, Havasupai do not take pride in their fields as Pueblo farmers do, regarding the land rather as a confining element which restricts their freedom. He states further (p. 53) that, in the prehistoric economy, neither agricultural produce nor the wild food supply was available in sufficient quantity to sustain the population, and that it was essential for each family to supplement hunting and gathering activities by farming. This view evokes the question of how the neighboring Walapai survived in a similar environment with virtually no farming.

Whiting's thesis is in contradition to Spier's that the Havasupai are so largely agriculturists that the "loss of a crop may mean a famine year" (Spier 1928, 101). Wild food plants were primarily a winter supplement to field products. Spier notes further (p. 108) that hunting is "a man's second occupation, for he relies mainly on his field products."

Perhaps the difference Whiting discerns between Pueblo and Havasupai attitudes toward farming is in part a result of natural environment. Certainly, Pueblo farmers must pit their ingenuity against desert aridity to win a harvest, while a seed dropped in a Cataract Canyon field will grow with only occasional attention from the farmer.

When adverse conditions brought Havasupai subsistence to a dangerously low level, as occasionally happened, some families would go to live with friends or relatives among the Hopi and Walapai. In turn, the Havasupai were hosts to families from both these tribes in years of bountiful harvest.

Spier (1928, 99-100) reported that the Havasupai journeyed from the plateau to the canyon in early spring, planting activities beginning in mid-April. In summer, everyone, except those who were away on trading trips, lived in the canyon village. Corn ripened for use by the middle of June, and the harvest continued until September, when other domestic crops and wild plant foods were also harvested and prepared for winter storage. By the middle of October, family groups were drifting back to semipermanent winter camps on the plateau.

When families were camped in Cataract Canyon, women made frequent gathering trips to the Esplanade. A number of springs there served as focal points for camps of certain families. Ownership of the various springs was vested in specific individuals, and both the springs and the surrounding land were jointly owned.

311 were inherited. The Esplanade seems to have been used with increasing
[231] frequency after the Havasupai acquired horses in some numbers. Even today, with cultivated alfalfa, only a few horses can be kept in the canyon. Owners of horses and cattle pasture their animals on range lands set aside
[131] for that purpose on the plateau. However, the Esplanade, located nearer Supai, and eroded into a series of blocks by ravines which can be crossed only at their upper ends near the base of the Whitewall, made convenient pasture which required no fencing and thus could be utilized individually.

Economic Transition

648 Early Havasupai contacts with the white man were infrequent and made little or no impact upon Havasupai economy for almost 100 years. Spier (1928, 83) reports that the Havasupai were discovered by Padre Francisco Garcés, who spent a few days in Cataract Canyon in 1776. Only two or three parties of white men made face to face contact with the tribe during the following century. Whiting (n. d., 19) considers the few Spanish influences which filtered to the Havasupai to have been passed primarily along established prehistoric trade routes, especially the one between the Hopi and the Havasupai. Cessation of Spanish activity was followed about 1830 by entrance of American trappers, and a little later by American exploratory expeditions into the area.

The first significant contact between Havasupai and white Americans involved prospectors and miners who entered Cataract Canyon following the 1863 discovery of gold in the Prescott area. By 1880, a lead deposit had been located below Havasupai farm lands in the vicinity of the waterfalls.
[135] Mining activity so near the agricultural area posed a threat to Havasupai economy, and quick action by military authorities brought about establishment of a reservation that same year (Whiting, n. d., 20). The initial mining operation failed because of transportation difficulties, but this did not mark the end of prospecting or mining attempts in Cataract Canyon.

On the plateau, the Havasupai were being squeezed in a pincers between the Walapai on the west, who had forced them from Mono Canyon and adjoining lands, and the Navaho on the east, who were invading the area between the Hopi mesas and the Havasupai camps. For a time, the Walapai and Navaho tribes had served as buffer groups between the Havasupai and direct white pressure, but eventually cattlemen moved into the Havasupai plateau range. Tourist interest in Grand Canyon furnished another pressure
[657] point (Whiting, n. d., 20). Establishment of a subagency and a day school in Cataract Canyon in 1895 marked the beginning of a period of increased isolation for the tribe. Families were induced to remain in the canyon while their children attended school. (Informants state that for a number of years the school year included the summer months, with a recess during the coldest winter months.)

434 in their absence. Significance may be found in their having solved their economic problems on an individual basis by voluntary resettlement off the reservation with a regular income.

221 461 178 From the original Havasupai annual migration cycle, with its combined hunting, gathering, and farming economy, transition to the present patchwork pattern of farming, labor-for-wage employment, and partial or complete government dependency, occurring over the last 80 year period, has produced an unevenness in adaptation of individuals within the tribe.

221 178 For many years following establishment of a subagency in Supai, certain families persisted in following the traditional pattern of winter plateau residence. Depletion of wild food plant resources and enforcement of laws restricting the hunting of larger game to a prescribed autumn hunting season probably did more than Indian Service persuasion to induce an increasing number of families to winter in the canyon. By 1950, only one old couple continued to winter regularly on the plateau. This couple, alone or with several of their adult children and their families, was absent from Supai only about four months.

[222] Maturity of the pinyon nut crop on the plateau occasions the only mass exodus of families from the canyon at the present time. For three or four weeks the pinyon forest is alive with family groups reaping the harvest and enjoying a sort of nostalgic holiday. Following the pinyon harvest, families drift back to Supai, a few of them detouring to visit at Grand Canyon or on the Walapai reservation.

729 There was speculation among interested Indian Service personnel that the 11 Havasupai World War II veterans would not settle in Supai after their horizons had been broadened by Army training and experience which included overseas service for some of them. However, 10 of them returned to their families in the canyon and to their prewar residence and employment patterns.

657 In 1951, on the recommendation of an extension agent who had surveyed the economic situation of the Havasupai Indians for the Office of Indian Affairs, Havasupai families became eligible for resettlement on the Colorado River Irrigation Project near Parker, Arizona. This program, originally designed for Navaho and Hopi resettlement, allotted to each family 40 acres of farm land with an option to lease an additional 20 acres (Kelly 1953, 80). Later, old army barracks were made available for housing. Three of the younger Havasupai men settled on these land allotments, but two of them returned to Supai. Other men who were contacted individually by the resident agent simply could not be persuaded to consid r moving away from Supai.

311 The land shortage is, of course, acute on the Havasupai reservation. It was estimated in 1950 that each family camp unit was farming about three or four acres. In 1955 a government soil scientist estimated that the

Havasupai Reservation includes about 300 acres of cultivable land. Asahel Perry, Indian Service extension agent, opined that in 1958 between 80 and 100 acres was under cultivation. A sizeable proportion of the arable acreage is not utilized due to the small size of individual plots. Almost always a family's holding consists of several patches of land scattered in different parts of the canyon, a consequence of the manner in which land is inherited or is distributed as need arises. Fences and ditches on the periphery of each field occupy a strip of ground about 3 ft. in width. Attempts to persuade tribal members to throw individual plots into a tribal cooperative farming program met with very limited success and the project was abandoned. Removal of fences to facilitate use of modern farm methods no doubt suggests to land owners a possible loss of claim to land or reduction in acreage. 311 [637]

Land ownership is a source of frequent controversy between Havasupai individuals. The Indian Service recognizes no clear legal title of an individual to a plot of land, considering instead that an individual has a right to use the land which it regards as tribally owned. On the other hand, the Indian Service recognizes individual ownership of houses on the land. 423 [578]

Five Havasupai individuals have accepted employment under the Indian Service Relocation Program. Three men, two of them unmarried, returned to the reservation within a short time. One man, a family head, has now been employed in a Los Angeles furniture factory for three years. An unmarried woman, in hospital work for 18 months, probably will continue on relocation; she had been previously employed off the reservation for approximately six years. 657

Religion

Havasupai religion finds expression in the songs and simple ritual of the sweat bath, in mythology, and in a body of traditional folk beliefs, as it does also in funeral customs and in shamanistic practices. Although religious ideology and ceremony are weakly developed, orientation toward the natural world and explanation of certain phenomena pertaining to man and his environment is made primarily in religious terms. 771

Spier (1928, 289) classed the Havasupai with the Great Basin tribes in meagerness of religious development. He states that they resembled both the "Basin-Plateau and Californian peoples in relative prominence of the shaman, the acquisition of power through dreams, not visions, and an hereditary bias to shamanism." They resemble, he says, the Southwestern tribes only in their infrequent use of prayer plumes and in prayers for rain and crop fertility. Traditional killing of an unsuccessful shaman he likens to the practice of the lower Colorado tribes. 771 114 191

8:Service E-5 (1946) 1947
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RECENT OBSERVATIONS ON HAVASUPAI LAND TENURE[1]

ELMAN SERVICE

THE HAVASUPAI INDIANS are a closely knit, isolated band in northern Arizona which has numbered around 200-250 people for as long as we know of them. Dr Leslie Spier visited them in 1918, 1919 and 1921 and has published a full description of their culture.[2] Geographic isolation has restricted the disruptive effects of white acculturation, so that Spier's ethnography is still accurately descriptive of the Havasupai, except for the few modern changes to be discussed in this paper. Aside from my interpretations as to the meaning of these more recent data, I have added nothing which was not already discussed by Spier in his monograph.

The Havasupai live by intensive irrigation farming, and make full use of the approximately 100 acres of tillable land. They are, understandably, strongly attached to their land, and feel that they live in a beautiful oasis which is unique in the arid Grand Canyon region. The individual land holdings are of very small patches, which, because of the vagaries of inheritance, are widely scattered among the holdings of other individuals. There are no particular problems involved in the control and apportioning of water for the fields, as the creek which bisects their canyon supplies more than enough for everyone. Upkeep of the main irrigation ditches is a community affair, while the lateral ditches are kept up by the persons effected.

The Havasupai have no clan system, nor do they even recognize lineages based on relationships beyond the grandparental generation. The conjugal unit and the patrilocal extended family are the chief social structures within the village, which now consists of 38 occupied camps. In an interesting paper called *A Suggested Origin for Gentile Organization*,[3] Spier pointed out the possibility of patrilineal gentes arising here should there occur (1) a greater emphasis in patrilineal inheritance, and (2) a greater regularity in patrilocal residence, which together might tend to bring a further extension of kinship recognition in the father's line. At the time of his visits, the usual post-marital residence was temporarily matrilocal, followed in a year or two by patrilocality.

1 Read before Section H–Anthropology of the American Association for the Advancement of Science, December 27, 1946. The data were obtained during a visit to Supai, Arizona, in May, June, and July, 1946.

2 *Havasupai Ethnography* (Anthropological Papers, American Museum of Natural History, Vol. 29, Part 3, 1928).

3 American Anthropologist, Vol. 24, pp. 487-489, 1922.

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428 than a closer one. It is explicitly felt and avowed that no man should be without enough land for himself and his family, and it is this feeling which tends to keep land holdings more equalized than they would be otherwise. It is quite possible 208 that in this factor public opinion, with a conception of community rights in land, 423 intervades itself most closely and overrides the idea of familial rights.

All this is not to say that the land is at any given time always equally divided 311 among families in accordance with the enumerated principles. For example, 423 there is at the present time a widespread dissatisfaction with the amount of land controlled by the Sinyella family. This is because, of the once numerous family, only two brothers remain in the canyon, and they are both unable to work. Consequently they have considerably more land than they can use. This excess land lies idle because several younger members of the Sinyella family are now living outside the canyon. It is difficult to foretell exactly how the community will resolve this situation, but I should guess that if the younger Sinyellas do not return soon, someone else, probably newlyweds, will get permission to use some of the land. After a period of occupation, this land will be thought of as theirs. This is the way such conditions have often worked out previously. Spier has stated that proprietary rights in land depended most emphatically on use,[7] and this feeling seems to be strong today. It is difficult to lend a piece of land for a while, for after the new incumbent has used it for more than a couple of years, he has a pretty valid claim on it and is difficult to dislodge.

428 In some cases widows hold some of their husband's land, but it is usually, 968 perhaps always, because of the magnanimity of their dead husband's relatives. As soon as a widow remarries, the land reverts to the original family.[8] In general, land tends to stay in the consanguineal family. Rarely, a daughter as well as a son may share in the family land, especially if she marries a man who has little or no land of his own. The Havasupai *say* that newlyweds should be given land 423 by whichever family can best afford it, or preferably by both. If they are not given land outright, as is sometimes the case, they should help work the land and share in the produce of whichever family can best accommodate them. Detailed inheritance histories show that actually the husband's family tends to assume this burden more often than the girl's, but it is not a clear cut rule. As already suggested, it is this condition which seems to determine the present day post-marital residence. There is no marriage rule, beyond a feeling that close

7 *Havasupai Ethnography*, p. 231.

8 See Ruth Benedict, *Marital Property Rights in Bilateral Society* (American Anthropologist, vol. 38, pp. 368-373, 1936).

12: Cushing E-5 (1881) 1882
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The Nation of the Willows.

I

291 The first Ha-va-su-pai I saw may be taken as a type of his race. But lightly clothed, a strange close head-band around his temples, he swiftly passed from one bush to another as we emerged from the little grove. Below us stretched
133 a green, moist plain of sandy soil, nearly two miles long by half a mile at its greatest width. We could catch only occasional glimpses of it through the rank growth of willows, the leaves of which everywhere brushed our heads as
241 we rode along the river trail. These
● 311 glimpses, however, revealed numerous cultivated fields of corn, beans, sunflowers, melons, peaches, apricots, and certain plants used in dyeing and basket-making, and usually carefully protected by hedges of wattled willows or fences of cotton-wood poles. Everywhere these fields were crossed and recrossed by a net-work of irrigating canals and trails.
342, Here and there were little cabins, or
361 shelters, flat-roofed, dirt-covered, and closed in on three sides by wattled flags, canes, and slender branches; while the front was protected by a hedge like those of the fields, only taller, placed a few feet before the house, and between which and the house burned smoky little fires. The houses were always nestled down among the thick willows bordering the river, or perched on some convenient shelf, under the shadows of the western precipice. In several places, within some of the great horizontal cracks of these western cliffs, and often high up, were little buildings of stone laid in mud plaster, and not unlike the cliff-dwellings we had observed on the way down, and of which ruins exist in almost every cañon throughout the great Southwest.

123 When we again caught sight of our
609 Kuhni, in a little opening near the trail, he was evidently uncertain whether to

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